Bereznyi and U.S. Patent No. 6,785,769 to Jacobs and U.S. Patent No. 6,014,667 to Jenkins et al.

Applicant respectfully traverses the rejections as they relate to pending Claims 1-2, and 11-14 for at least the following reason(s).

As explained in the first few pages of the application as originally filed, the present invention relates to a server of a client-server vehicle data communication system and a client terminal of a vehicle ***for efficiently updating service contents stored in the client terminal and minimizing wasted time and cost for communication***, and a client-server vehicle data communication system employing such a server and client terminal. That is, the present invention is not simply concerned with a system for wirelessly data communicating between and effectuating a network with at least one vehicle and at lest one data processing resource, but rather is concerned with efficiently effectuating the update of the data stored in a client terminal. A manner in which such is accomplished is by controlling the frequency of the update of the service content provided to the client terminal according to a cache identifier which indicates a data cache stored duration time.

In this regard, Claim 1 recites a client-server vehicle data communication system, including a server; a service contents managing section for managing a plurality of service contents to be provided to a client terminal of a vehicle, wherein the service contents managing section includes a cache identifier providing section for assigning each service content provided to the client terminal a cache identifier ***which indicates a data cache stored duration time***

in the client terminal, so as to manage ***the data cache stored duration time*** of the service content, wherein the client terminal uses the server, and a cache state managing section for managing the data cache stored duration time of the service content is provided from the server according to the cache identifier assigned to the service content; and a request sending section for sending a request signal for the service content to the server, where the server content is provided from the server when the request signal is received by the server, wherein the cache identifier indicates a condition for caching of the service content, and wherein when a request for the service content is again issued in the client terminal while the condition for the caching is satisfied and the service content is cached in a memory of the client terminal, the service content in the memory is read out without sending the request signal for the service content to the server.

The Office Action asserts Kolls discloses "a service contents managing section for managing a plurality of service contents to be provided to a client terminal of a vehicle, wherein the service contents managing section includes a cache identifier providing a section for assigning each service content provided to the client terminal a cache identifier which indicates a data cache stored duration time in the client terminal, so as to manage the data cache stored duration time of the service content (col. 6, lines 44-63)" (emphasis added). Applicants respectfully submit that the Office Action mischaracterizes that which is asserted to be taught by Kolls.

Kolls teaches a system for wirelessly data communicating between and effectuating a network with a plurality of vehicles and a plurality of data processing resources. Kolls does not teach or remotely suggest controlling the frequency of the update of the service content provided to the client terminal according to a cache identifier which indicates a data cache stored duration time.

In fact, a review of Kolls failed to uncover any mention of controlling the frequency of the service content being updated based on a cache identifier that indicates a data cache stored duration time. Rather, Kolls appears to teach a system wherein the frequency of such an update is dictated by the availability of an appropriate data processing resource or in-vehicle device. That is, if the communication interface device (COM) 100 is out of range of an in-vehicle device 200, then the data is cached until the next appropriate in-vehicle device is available,

For example, column 6, lines 45-63 of Kolls, provides clear insight into that which is being accomplished by Kolls. The cited passage states:

> In an exemplary embodiment a COM device 100 can cache data communicated to it by an Internet based data processing resource or an in-vehicle device 200. ***In such as embodiment the COM device 100 can receive and cache data until such time the appropriate data processing resource or in-vehicle device 200 becomes available.*** The ability to cache data can allow a COM device 100 to hold data at a plurality of COM device 100 locations ***until the appropriate time or until the desired in-vehicle device 200 comes into wireless data communicating proximity.*** As an example and not limitation, an Internet based data processing resource could initiate a command to stop a vehicle equipped with an in-vehicle device 200. Such a command can be cached in a plurality of COM device 100 until such time the desired in-vehicle 200 comes into wireless data communication proximity. At such time the command can be data communicated. And the vehicle stopped. The results can then be data

communicated to the appropriate Internet based data processing resource as required.

Applicants note that nowhere in the passage of Kolls cited by the Office Action for supposedly teaching "a service contents managing section for managing a plurality of service contents to be provided to a client terminal of a vehicle, wherein the service contents managing section includes a cache identifier providing a section for assigning each service content provided to the client terminal a cache identifier which indicates a data cache stored duration time in the client terminal, so as to manage the data cache stored duration time of the service content," does the term data cache stored duration time even appear. Moreover, it is clear that Kolls manages the caching of data based on the availability of an in-vehicle device 200 coming into wireless data communication proximity to the COM device 100.

Applicants respectfully submit that Kolls is totally silent to and fails to teach or remotely suggest a service contents managing section for managing a plurality of service contents to be provided to a client terminal of a vehicle, wherein the service contents managing section includes a cache identifier providing section for assigning each service content provided to the client terminal a cache identifier ***which indicates a data cache stored duration time in the client terminal,*** so as to manage ***the data cache stored duration time*** of the service content, as is recited by Claim 1.

Applicants submit Irons also fails to teach or suggest the above-described service contents managing section recited by Claim 1.

For example, the Office Action asserts that Irons discloses "wherein the service contents managing section includes a cache identifier that provides a section for assigning each service content provided to a client terminal with a cache identifier which indicates a data cache stored duration time in the client terminal (col. 3, lines 39-46, col. 8, lines 7-17), so as to manage the data cache stored duration time of the service content (col. 3, lines 39-46, col. 8, lines 7-17)."

Applicants respectfully disagree with the Office Action as to what Irons teaches in the cited passages. In particular, Applicants submit that Irons does not relate to a server of a client-server vehicle data communication system and a client terminal of a vehicle for efficiently updating service contents stored in the client terminal and minimizing wasted time and cost for communication, and a client-server vehicle data communication system employing such a server and client terminal. That is, Irons relates to an engine control system for a vehicle engine that includes an engine control module that enters a modified sleep mode when the vehicle key switch is turned "off."

Rather, the cited passage at col. 3, lines 39-46 of Irons actually states that a feature of the Irons system is that the sleep mode module includes a sleep mode termination timer (SMT timer) that can be preset by the operator to a particular time interval, wherein a counter within the sleep mode module counts up until it reaches the preset timer value. At that point, the sleep mode is terminated and all data communications are disabled in accordance with the normal engine shut down protocol.

Moreover, the cited passage at col. 8, lines 7-17 of Irons merely states that a sleep task module directs that volatile data caches be flushed to a non-volatile or flash memory. In other words, the engine control module maintains various temporary data caches that are used by various task modules and algorithm steps implemented by the engine control module. In anticipation of subsequent use of these data caches, the sleep task module flushes the data caches and then implements a predetermined time delay.

As with Kolls above, at no point does Irons teach or remotely suggest a service contents managing section for managing a plurality of service contents wherein the service contents managing section includes a cache identifier providing section for assigning each service content provided to the client terminal a cache identifier which indicates a data cache stored duration time of the service content that is managed. Rather, Irons merely flushes cached data with a predetermined time delay that is intended to assure all the cached data is flushed or moved.

Applicants respectfully submit that Irons, like Kolls, is totally silent to and fails to teach or remotely suggest a service contents managing section for managing a plurality of service contents to be provided to a client terminal of a vehicle, wherein the service contents managing section includes a cache identifier providing section for assigning each service content provided to the client terminal a cache identifier ***which indicates a data cache stored duration time in the client terminal,*** so as to manage ***the data cache stored duration time*** of the service content, as is recited by Claim 1.

Bereznyi is cited for teaching that when a request for service content is again issued in a client terminal while a condition for caching is satisfied and the service content is cached in a memory of the client terminal, the service contents in the memory is read out without sending the request signal for the service content to the server. As such, Bereznyi fails to cure or otherwise address the above-described deficiencies of Kolls and/or Irons.

The Office Action admits that Matsugatani fails to teach or suggest a service contents managing section for managing a plurality of service contents to be provided to a client terminal of a vehicle, wherein the service contents managing section includes a cache identifier providing section for assigning each service content provided to the client terminal a cache identifier which indicates a data cache stored duration time in the client terminal, so as to manage the data cache stored duration time of the service content. As such, Matsugatani fails to cure or otherwise address the above-described deficiencies of Kolls and/or Irons.

Desens is cited merely for teaching an assigned cache identifier is an identifier for indicating that the service content is stored while a travel distance of the vehicle from where the vehicle obtained the service content is within a predetermined value. As such, Desens fails to cure or otherwise address the above-described deficiencies of Kolls and/or Irons.

Jacobs is cited for disclosing a cache state managing section for managing the data cache stored duration time of the service content is provided from a server. Applicants respectfully submit that the Office Action misstates that which is actually taught by Jacobs in column 7, lines 24-34. Rather, Jacobs

actually teaches that a session-aware cache is configured to determine whether a session for which it is serving cached data is near an expiration time. Regardless, applicants submit that there is absolutely no teaching or suggestion in Jacobs as to a service contents managing section for managing a plurality of service contents to be provided to a client terminal of a vehicle, wherein the service contents managing section includes a cache identifier providing section for assigning each service content provided to the client terminal a cache identifier which indicates a data cache stored duration time in the client terminal, so as to manage the data cache stored duration time of the service content, as is recited by Claim 1. As such, Jacobs fails to cure or otherwise address the above-described deficiencies of Kolls and/or Irons.

Finally, the Office Action asserts that Jenkins teaches a cache identifier which indicates a data cache stored duration time at col. 3, lines 28-46 and col. 7, lines 51-65. Applicants submit the Office Action is again erroneous as to that which is supposedly taught by the cited reference, in this case, Jenkins. Rather, the cited passages of Jenkins merely state that Jenkins teaches a component identifier, such as a distinguished name, which identifies a cache-enabled component by acting as a key during searches for the cache. At no point does Jenkins teach or remotely suggest a service contents managing section for managing a plurality of service contents to be provided to a client terminal of a vehicle, wherein the service contents managing section includes a cache identifier providing section for assigning each service content provided to the client terminal a cache identifier which indicates a data cache stored duration

time in the client terminal, so as to manage the data cache stored duration time of the service content, as is recited by Claim 1. As such, Jenkins fails to cure or otherwise address the above-described deficiencies of Kolls and/or Irons.

In view of the above, Applicant respectfully submits that Kolls, Bereznyi, Irons, Desens, Matsugatani, Jacobs and Jenkins, alone or in any combination thereof, fail to teach or suggest the features of the invention recited by Claim 1. Therefore, if one of ordinary skill in the art were to combine the teachings of the applied references, the combined teachings would not result in the invention recited by Claim 1. Accordingly, Applicant respectfully submits that Claim 1 is not rendered obvious by Kolls, Bereznyi, Irons, Desens, Matsugatani, Jacobs and Jenkins, alone or in any combination thereof, and should therefore be deemed allowable.

Claims 2 and 11-14 depend from Claim 1. It is respectfully submitted that these dependent claims be deemed allowable for at least the same reason(s) Claim 1 is allowable, as well as for the additional subject matter recited therein.

Applicant respectfully requests withdrawal of both rejections.

In view of the above, reconsideration of the application, withdrawal of the outstanding rejections, allowance of Claims 1-2 and 11-14, and the prompt issuance of a Notice of Allowability is respectfully requested.

Should the Examiner believe anything further is desirable in order to place the application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 107439.00098.**

Respectfully submitted,
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